marantz®

Model 6300
Turntable

MARANTZ CO., INC. 20525 NORDHOFF STREET, CHATSWORTH, CALIFORNIA 91311
A WHOLLY-OWNED SUBSIDIARY OF SUPERSCOPE INC., CHATSWORTH, CALIFORNIA 91311

FOREWORD

To obtain maximum performance and enjoyment from the Model 6300 Turntable, please study these instructions carefully. Although installing the turntable is not complicated, the steps in the set-up procedure should be followed methodically in the order that they are given. Our recommended procedures will assure you of securing the superb performance for which the Model 6300 is capable.

For quick identification of the controls, adjustments and connection facilities on the Model 6300 Turntable, all references to them in this manual will be printed in **BOLDFACE** type.

AFTER UNPACKING

The turntable has been packed in material specially designed for protect it from damage in shipment. After removing the turntable from the carton, put the packing materials, fillers and cushioning in the carton and store it for future use. The packing materials will prove valuable in preventing damage should it become necessary to transport or ship the Model 6300. Be especially careful that you do not inadvertently throw away or lose any of the parts packed with the unit. Instructions for repacking are shown on page 20 of this manual.

Please inspect your Model 6300 Turntable carefully for any signs of shipping damage. Our very strict quality control and professional pride ensure that each Model 6300 left the factory in perfect condition. If the unit is damaged or fails to operate, immediately notify your dealer. If the unit was shipped to you directly, notify the transportation company without delay. Only you, the consignee, may institute a claim against the carrier for shipping damage. Save the carton and all packing material as evidence of damage for their inspection. Should assistance be required, the Marantz Company will cooperate fully in assisting your claim.

Please fill out and mail the Warranty Registration Card within ten days of purchase. The card will remain on file at the Marantz Company for the duration of the warranty period. We also strongly advise that you retain your sales receipt to provide proof of purchase in the event that Warranty service is sought.

GENERAL DESCRIPTION

The Marantz Model 6300 Turntable incorporates the advanced, innovative design and unparalleled technology that has made Marantz famous in the audio component industry.

The Model 6300 features a servo-controlled direct drive platter and a precision tone arm mounted on gimbal bearings. The Model 6300 also features hydraulically damped cueing, auto shut-off, low capacitance cables suitable for use with CD-4, and shock absorbing mounting feet to prevent acoustic feedback.

AC Line Operation

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

QUICK REFERENCE INDEX

Figure 1 shows the location of the main controls and adjustments on the Model 6300. Listed by each feature is the number of the page where a description about the feature appears.

Before proceding with connecting your new turntable, take a few moments to acquaint yourself with some of the features and terminology you will encounter in this book.

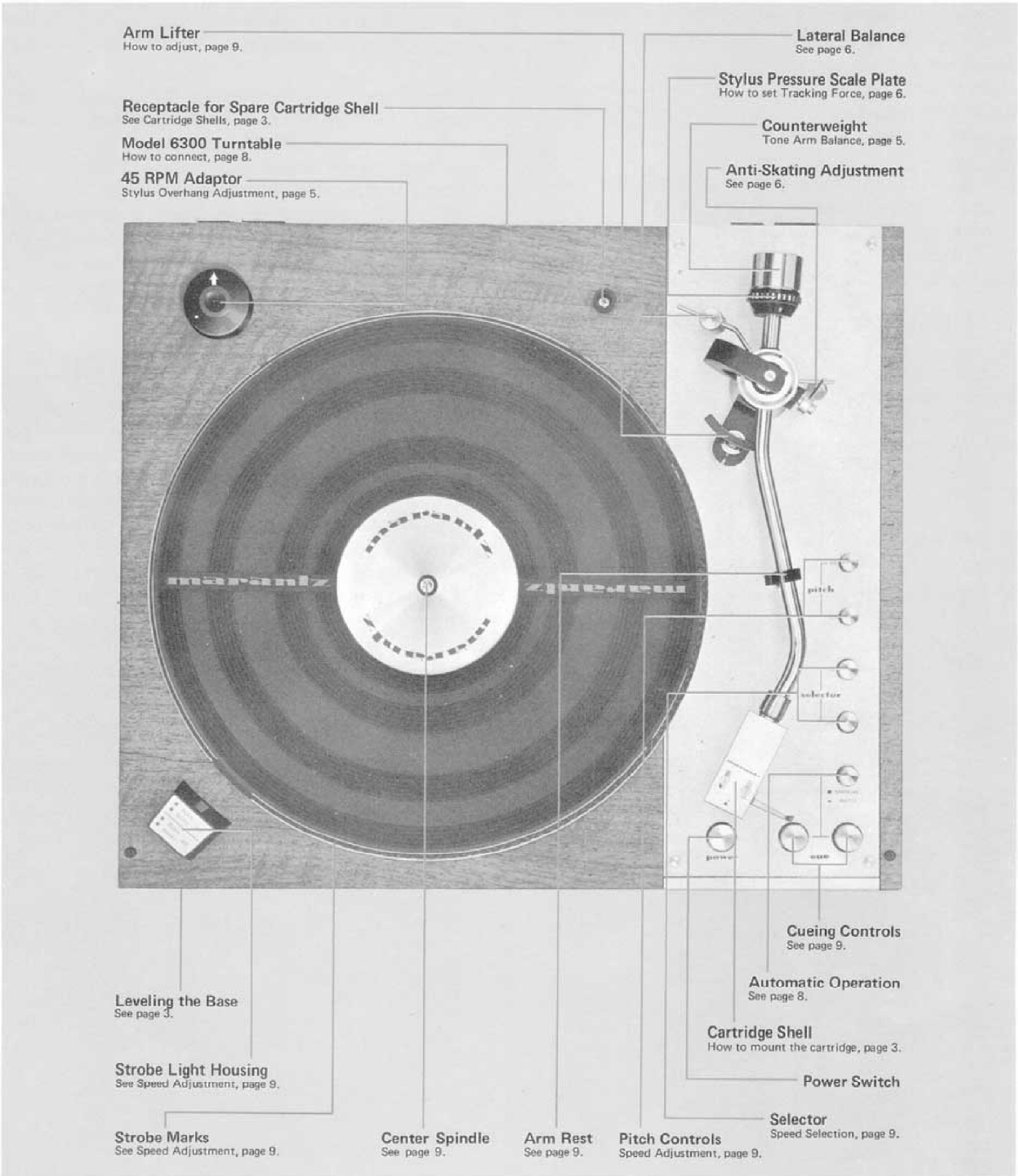

Figure 1. Main Controls and Adjustments

PREPARATION FOR USE

TURNTABLE LOCATION

Optimum performance will be secured from the suspension system and tone arm by placing the unit on a flat, level, vibration-free surface that is resistant to accidental jarring or impact. The Model 6300 is equipped with mounting feet which are designed to suppress acoustic feedback. Nevertheless, it is considered standard practice to avoid installing the turntable on or near speaker enclosures.

The power transformers used in amplifiers can produce large magnetic fields. If a magnetic phono cartridge is operated within such a magnetic field, hum may be produced. Therefore, avoid placing the turntable near a large power amplifier.

LEVELING THE BASE

The vertical height of each of the mounting feet can be adjusted by twisting the outer ring on each foot. As viewed from the top, clockwise rotation will elevate the base, and conversely, counter-clockwise rotation of the adjustment will lower the base.

Adjust the feet so that the weight of the base is distributed evenly and squarely. The top surface of the base should be level.

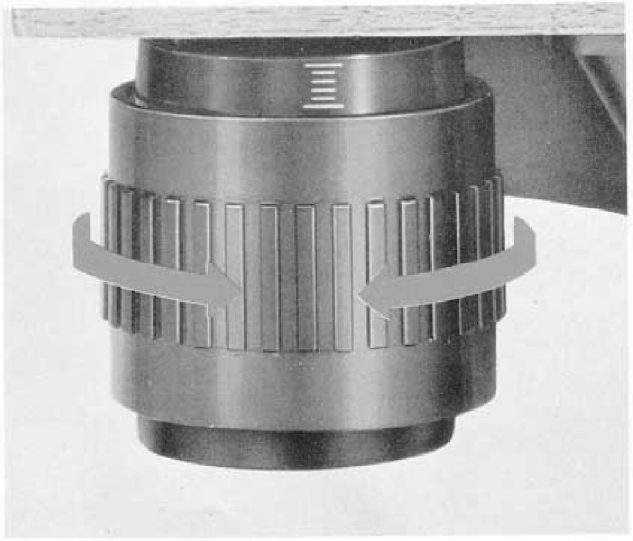

Figure 2. Adjustable Foot

PHONO CARTRIDGE

Any high quality stereo phono cartridge will provide excellent results with the Marantz 6300, including cartridges designed for CD-4 four channel reproduction. If you haven't already obtained a cartridge, your Marantz dealer can assist you in selecting one which will suit your audio needs.

CARTRIDGE SHELLS

The Model 6300 is supplied with two cartridge shells. Two shells are provided to facilitate substituting one cartridge for another. (It is far easier to interchange and compare two different cartridges if they are already mounted in shells!) If you wish to interchange more than two cartridges, additional shells may be obtained from your Marantz dealer. The spare shell can be kept in the receptacle located on the surface of the base.

MOUNTING THE CARTRIDGE

When working with your phono cartridge, be careful not to damage the stylus. Once it becomes bent by rough handling, it cannot be straightened; it must be replaced. If the cartridge is equipped with a protective clip, keep the clip attached until after the cartridge shell is installed on the tone arm.

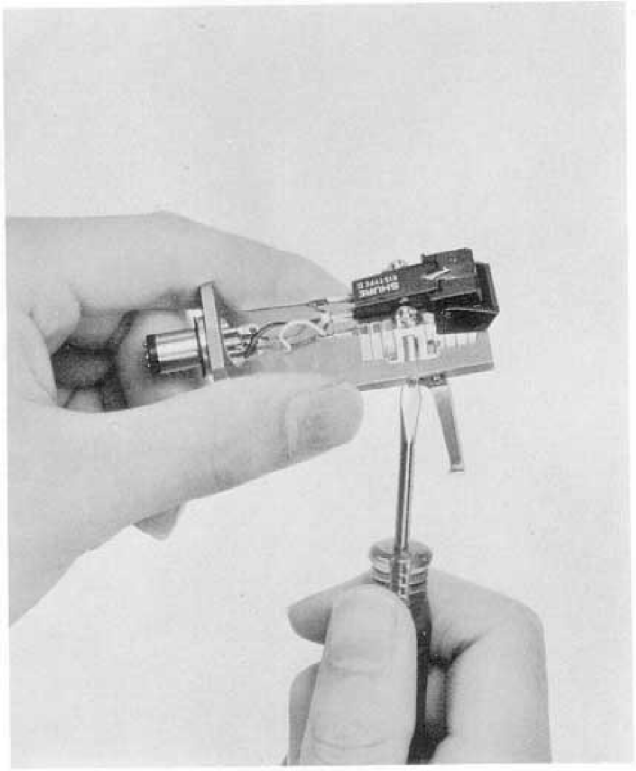

Figure 3. Mounting the Cartridge

The cartridge shell plugs into the tone arm and is secured by a threaded sleeve. The cartridge is held inside the shell by two screws which pass through the long slots in the top of the shell. Appropriate mounting screws and nuts and a small screwdriver are provided with the Model 6300. Spacers, if needed, will be provided by the cartridge manufacturer. Obviously, it's much easier to install the cartridge when the shell is detached from the tone arm.

Before the cartridge is screwed into the shell, the small clips at the ends of the wires in the cartridge shell should be pushed onto their corresponding cartridge connection pins.
The wires are color coded as follows:

RIGHT CHANNEL HOT	–	RED
RIGHT CHANNEL GROUND	–	GREEN
LEFT CHANNEL HOT	–	WHITE
LEFT CHANNEL GROUND	–	BLUE

The cartridge or its accompanying technical sheet will identify the cartridge connection pins. It may be necessary to slightly compress the terminal clips with your fingers to make them fit snugly on the prongs of some cartridges.

After the wires are connected, insert the mounting screws through the top of the cartridge shell and through the mounting tabs on the cartridge itself. Then, attach the two nuts, just tight enough to hold the cartridge (It is likely they will have to be loosened again to adjust the placement of the cartridge in the shell). It may also be necessary to add spacers between the cartridge and shell to make the stylus track at the correct angle. This, of course, cannot be checked until after the shell is attached to the arm.

Tuck the lead wires neatly behind the cartridge.

Next, attach the cartridge shell to the tone arm.

ADJUSTMENTS

After the cartridge is mounted, several adjustments must be made to optimize turntable performance. First, the stylus overhang must be adjusted; then the tone arm balance, lateral balance, tracking force, and anti-skating force.

STYLUS OVERHANG

The Model 6300 Turntable is designed to operate with the least distortion when the tip of the stylus is at a particular distance from the tone arm pivot. For this reason, the cartridge shell is slotted, allowing the cartridge with its mounting screws to be slid toward or away from the pivot point. This, in effect, changes the radius of the arc described by the stylus. Supplied in the accessory kit is a 45 RPM spindle adaptor. The adaptor has been specially marked with an arrow and a dot to aid you in setting the proper stylus overhang. Proceed as follows:

1. With the turntable stopped, place the 45 RPM adaptor on the center spindle with the arrow pointing to the rear of the turntable.
2. Remove the arm from its arm rest and remove the protective cover (if any) from the stylus.
3. Place the stylus tip over the 45 RPM adaptor and adjust the cartridge so that the stylus tip will be perfectly centered in the dot.
4. Make sure that the cartridge is installed straight. The sides of the cartridge must remain parallel to the sides of the shell.
5. Snug up the mounting screws.

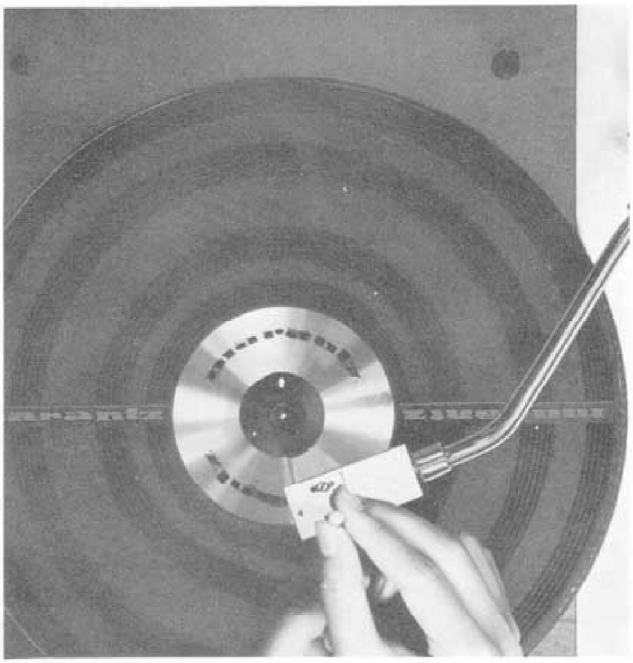

Figure 4. Stylus Overhang Adjustment

VERTICAL TONE ARM BALANCE

The adjustable counterweight at the end of the tone arm establishes tone arm balance and stylus tracking force. Since no two types of cartridges weigh the same, the balance and tracking force must be adjusted for each cartridge being used.

First, to establish a point of reference, the entire arm assembly (with cartridge installed) must be balanced. If the cartridge has a removable stylus protector, remove it, (as you would to play a record). Release the tone arm from the arm rest.

To adjust the tone arm balance, set the anti-skate weight at minimum (see Figure 7) and disable the action of the anti-skate mechanism by lifting the anti-skate weight as shown in Figure 5. The tone arm should be positioned so that the anti-skate mechanism does not influence the arm.

To balance the arm, adjust the position of the counterweight by rotating it. A numbered stylus pressure scale plate is located immediately in front of the counterweight. Rotating the scale plate alone does not change the counterweight's position. To change the balance, grasp and turn the counterweight itself.

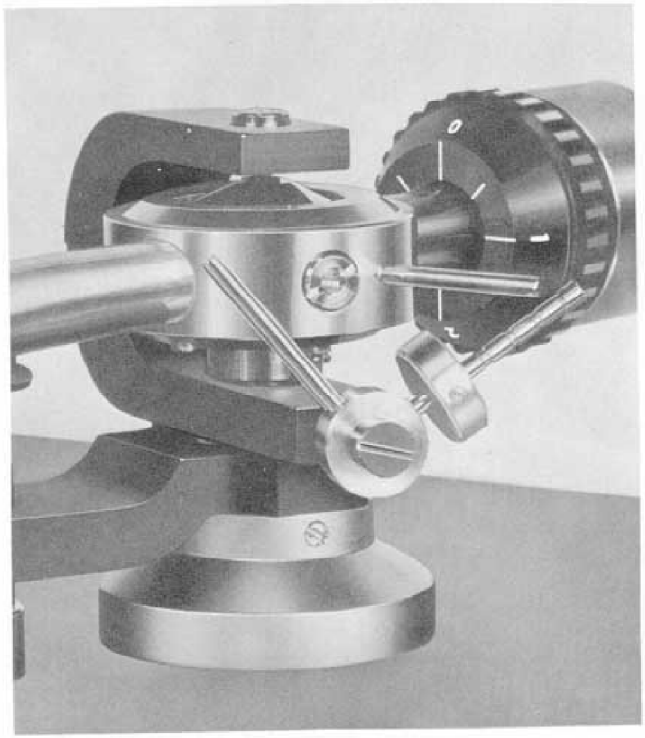

Figure 5. Tone Arm Balance Adjustment

Adjust the weight so that the arm is level (parallel to the turntable surface) with the cartridge suspended in mid air. Then, without moving the counterweight, set the stylus pressure scale plate to indicate zero. This establishes a reference point for setting the tracking force, which is set after checking the lateral balance.

LATERAL BALANCE

The lateral balance adjustment is made while the cartridge is suspended above the platter surface. The purpose of the adjustment is to assure that the tone arm is not influenced by any undesirable lateral (sideways) forces.

The lateral balance weight is located to the left of the counterweights. It is secured with a small set screw.

Place the arm in the same position as for checking vertical balance. Then, tilt the entire turntable by lifting first the left side, then the right about two inches. The arm should not move when the turntable is tilted. If it does, change the position of the lateral balance weight until no movement of the arm is observed when the turntable is tilted. The weight position can be changed by loosening the small set screw on the weight as shown in Figure 6.

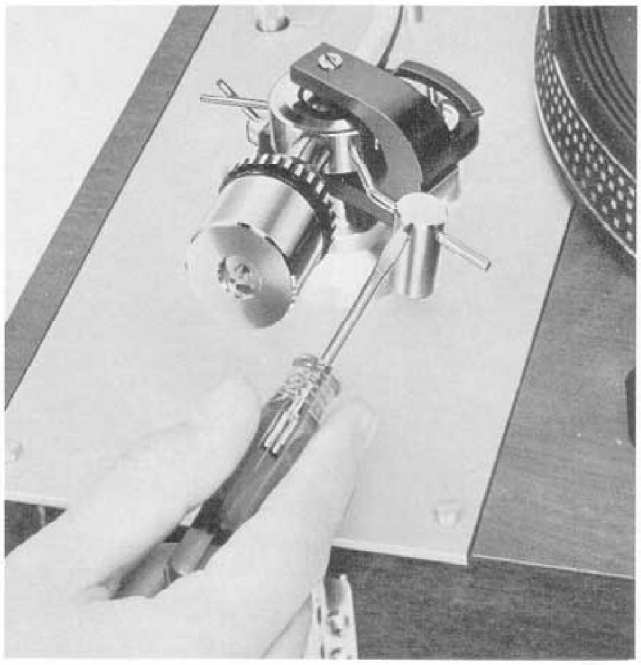

Figure 6. Lateral Balance Weight

TRACKING FORCE

For the recommended tracking force, refer to the instructions that accompany the cartridge.

Tracking force, the downward pressure of the stylus against the record, is produced by simply setting the arm off balance in the appropriate direction. That is, the counterweight is screwed inward (toward the arm pivot) until the desired downward pressure is achieved.

The stylus pressure scale plate is in frictional contact with the counterweight, so that they rotate together when the counterweight is turned. The numbers on the scale plate correspond to the tracking force measured in grams. So, if the desired tracking force is two grams, turn the counterweight inward until the stylus pressure scale plate registers 2.

ANTI-SKATING ADJUSTMENT

The anti-skating lever is provided to counteract the natural tendency for the arm to "skate" toward the center of the record as it is being played. The more tracking force used, the more anti-skating force required.

The anti-skating weight is adjustable with notched graduations that correspond with the tracking force markings on the stylus pressure scale plate.

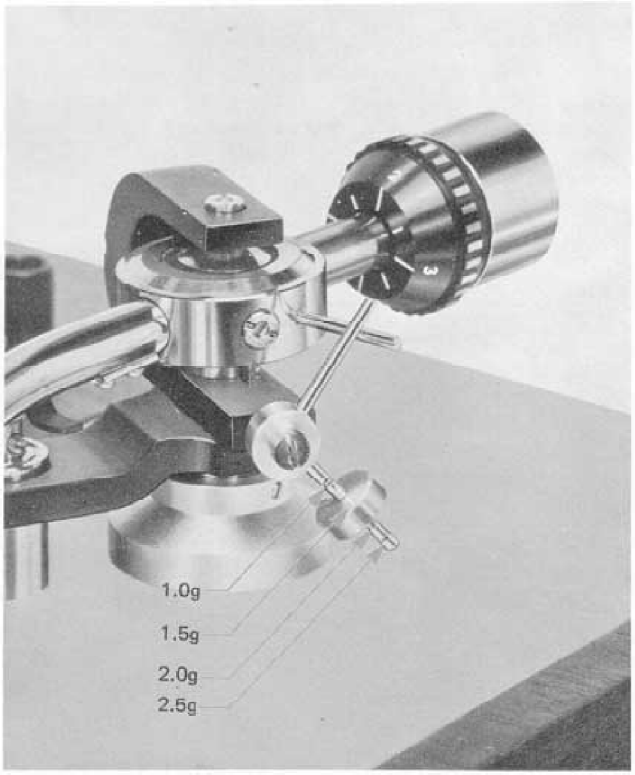

Figure 7. Anti-Skating Mechanism

The weight is placed in the notch nearest the end of the lever for a tracking force of 2.5 grams. The next three notches inward correspond to 2.0, 1.5, and 1.0 grams, respectively. (See Figure 7.)

Place the arm in the arm rest.

STYLUS TRACKING ANGLE

After setting up the arm for playing, it is important to check the tracking angle, because improper tracking angle will cause distortion and premature record wear. Most phono cartridges are designed so that when the cartridge is mounted on a surface parallel with the record surface, the stylus will track at the proper angle (see Figure 8). The surface inside of the cartridge shell (against which the cartridge is mounted) is parallel to the record surface when the tone arm is level. Visually check the angle of the tone arm in actual playing position. If it is not level and parallel with the record surface, then it is necessary to change the height of the tone arm's pivot.

NOTE: **Some cartridges are built so that their bodies are at an angle with respect to their own mounting tabs. No attempt should be made to change this angle. Simply make sure that the cartridge mounting tab surfaces are parallel to the tone arm shell mounting surface before proceeding with the arm height adjustment.**

To adjust the height of the pivot, loosen the two set screws near the base of the pivot mechanism and a third screw that tightens the clamp around the shaft for the arm lifter (see Figure 9). When the screws are loose, the entire pivot mechanism can be slid up and down.

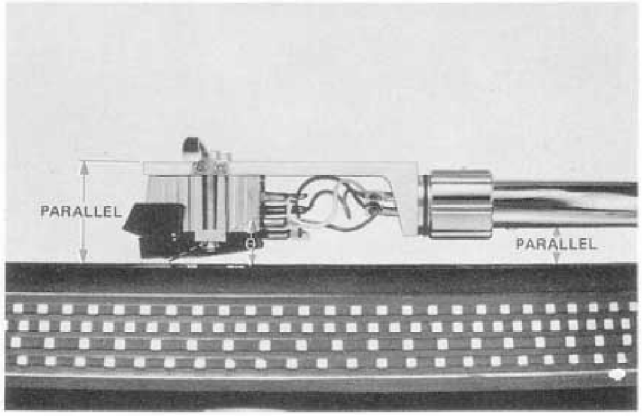

Figure 8. Tracking Angle

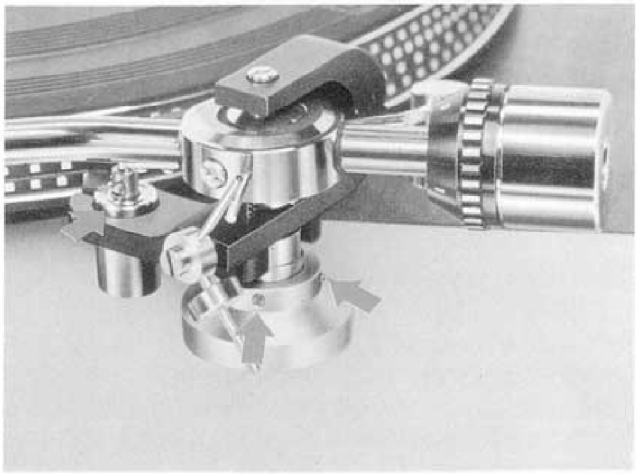

Figure 9. Pivot Height Adjustment

If the arm cannot be made level in the adjustment range provided, appropriate spacers which were supplied with the cartridge must be inserted between the cartridge and the shell. This, of course, necessitates temporarily removing the cartridge from the shell and rechecking the arm balance and adjustment.

If the height of the arm is modified, it is necessary to check and adjust the cueing mechanism to operate properly. See "Cueing Controls", page 9.

CONNECTION TO AMPLIFIER

Plug the left and right output cables into the PHONO jacks of your preamplifier or receiver. (The red plug is the right stereo channel.)

Connect the ground wire which runs in between the two output cables to the CHASSIS GROUND BINDING POST of your receiver.

NOTE: **Depending on the cartridge there may be occasions where it is more advantageous to leave the ground wire disconnected. Connect your turntable in the condition which produces the best performance.**

Then, plug the AC power cord into an outlet supplying the proper voltage, or into one of the SWITCHED convenience outlets on the back of your receiver.

SIMPLIFIED OPERATING PROCEDURES

MANUAL OPERATION

1. Turn on your amplifier system and select the Model 6300 Turntable as the source input.
2. Place a record on the turntable. For a 45 RPM record, fit the supplied adaptor over the turntable center spindle.
3. Select the desired speed (33 or 45).
4. Place the turntable in **MANUAL** mode (push-switch released).
5. Depress the **POWER** switch. The turntable will rotate. While the record is turning, you may wish to clean its surface with a suitable cleaning device before playing.
6. Take the arm out of the arm rest and position the stylus directly above the desired groove.
7. Press the **DOWN** pushbutton. The stylus will slowly descend to the selected groove. A small amount of practice will enable precise record cueing.
8. To lift the tone arm at any time, press the **UP** pushbutton.
9. To stop the turntable, press and release the **POWER** pushswitch.

AUTOMATIC OPERATION

When in the **AUTO** mode the tone arm will lift up and the turntable will stop automatically when the record has finished playing. Operation is as follows:

1. Depress the **AUTO/MANUAL** pushswitch.
2. Depress the **POWER** switch. The turntable will not rotate, yet.
3. Position the stylus over the first groove of the record.
4. Press the **CUE DOWN** button. Now the turntable will start, and the arm will slowly descend. By the time the stylus contacts the disc, the turntable will be up to speed.
5. When the record finishes playing, the arm will lift and the turntable will stop.
6. To lift the arm and stop the turntable before the end of the record, press the **CUE UP** pushbutton.

If you wish to clean the record as it rotates on the turntable, leave the arm on the arm rest and press the **DOWN** pushbutton, or temporarily put the turntable in **MANUAL** mode.

SPEED SELECTION AND ADJUSTMENT

Two sets of speed controls are provided on the top panel of the Model 6300. The **SELECTOR** pushswitches select the desired RPM (33 or 45). The turntable speed can be precisely tuned by adjusting **PITCH** controls. Clockwise rotation makes the turntable rotate slightly faster; counterclockwise, slightly slower.

The speed of the turntable can be checked by means of a built-in strobe light which operates whenever the platter is rotating. To determine if the turntable is adjusted to the proper speed, start the turntable and observe the edge of the platter where it passes in front of the strobe light. The four rows of strobe marks which are machined on the edge of the platter correspond to the speeds and AC line frequencies indicated on the strobe light housing. (The standard AC line frequency for the United States is 60 Hz.) When the turntable speed is adjusted correctly, the row of dots corresponding to the selected speed will appear to stand still as they pass under the strobe light. If not, adjust the appropriate pitch control.

CUEING CONTROLS

The **CUE** buttons, marked **UP** and **DOWN**, control the vertical motion of the arm lifter. The hydraulically-damped arm lifter gently raises and lowers the arm and stylus. Obviously, using this slow motion device is much safer for your records than lowering the stylus by hand.

The height of the arm lifter is adjustable by means of a set screw on its vertical shaft. The crescent-shaped lifting platform which contacts the arm should be positioned so it doesn't interfere with the arm while the record is playing, yet lifts it fully when the **UP** button is pressed.

ARM REST

The arm rest holds the arm while not in use. In the event the turntable were jostled or bumped, the lock on the arm rest secures the arm and prevents damage to the stylus.

The arm rest can be vertically adjusted. Loosen the set screw and lift to the desired height. Then tighten the set screw.

TURNTABLE CENTER SPINDLE

The Model 6300 center spindle is designed to precisely fit record center holes conforming to the NAB standard. However, some records may fit tightly on the spindle, because in the record stamping process some scraps of plastic were left sticking to the edge of the center hole. In such a case, the scraps can easily be removed by inserting the point of a pencil in the center hole and turning the pencil.

DUST COVER

The dust cover attaches to the base by means of two spring-loaded hinges which fit into two slotted brackets on the rear of the base. The dust cover is designed to prevent dust from settling on your records while they play. However, it is also important to keep the dust cover closed when no records are being played, to prevent dust from settling on the record mat. Even though this dust does not land directly on a playing record, it can be later transferred to the record surface by static electricity. If you accidentally leave the dust cover open for a long period of time, clean the record mat before playing any records.

MAINTENANCE

The Model 6300 Turntable and arm are factory lubricated and sealed. No further lubrication is needed for these assemblies.

CLEANING THE MODEL 6300

The unit should be kept clean and dust-free. A cloth dampened with water will remove most dust. To clean fingerprints or oil marks from the anodized aluminum surface or the plastic dust cover, use a soft lint-free cloth or cotton swab slightly dampened with a mild solution of detergent and water. Never use scouring pads, steel wool, scouring powders or harsh chemical agents such as lye solution. The wooden base may be polished with a commercial furniture polish.

REPAIRS

Only the most competent and qualified service technicians should be allowed to service the Model 6300. The Marantz Company and its factory-trained warranty station personnel have the knowledge and special equipment needed for repair and calibration of this precision instrument.

In the event of difficulty, refer to the list of Authorized Marantz Service Stations packed with the Model 6300 or write directly to the location listed below for the name and address of the Marantz authorized service station nearest your home or business. Please include the model and serial number of your unit together with a full description of what you feel is abnormal in its behavior.

Marantz Company, Inc.
Technical Services Dept.
P.O. Box 577
Chatsworth, CA 91311
U.S.A.

TECHNICAL SPECIFICATIONS

Drive System	Direct Drive System
Drive Motor Type	DC Servo-Controlled
Speed Control Range	6% (±3%)
Rumble (RRLL) NAB	−52 dB
Wow and Flutter (WRMS) NAB	0.05%
Tone Arm Length	9-1/8"
Platter Weight	3 lbs. 8 oz.
Platter Diameter	12-1/8"

GENERAL

Power Requirements	120 V AC, 50/60 Hz
Power Consumption	12 Watts
Dimensions:	
Width	17-1/8 inches
Height	7-1/32 inches
Depth	14-13/16 inches
Weight:	
Unit alone	21.4 lbs
Packed for Shipment	28.6 lbs

REPACKING FOR SHIPMENT

Should it become necessary to repack your Model 6300 for shipment to the factory, to an authorized service station, or elsewhere, please observe the following precautions:

a. Do not ship your unit to the factory without an Authorized Return Label, which the Marantz Company will supply if the description of difficulties appears to warrant factory service.
b. Pack the unit carefully, using the original material as shown in Figure 10.
   PLEASE NOTE that if you have discarded, lost, or damaged the packing material, new packing material may be obtained by writing to the **Marantz Technical Services Department.** The carton, its fillers, and packing instructions will be returned to you at a nominal charge.
c. Ship via a reputable carrier (do not use Parcel Post) and obtain a shipping receipt from the carrier.
d. Insure the unit for its full value.
e. Be sure to include your return address on the shipping label.

CAUTION: DO NOT SHIP THE TURNTABLE WITH THE PLATTER INSTALLED. DOING SO MAY DAMAGE THE TURNTABLE SPINDLE. REMOVE THE PLATTER AND PACK AS ILLUSTRATED FOR SHIPPING.

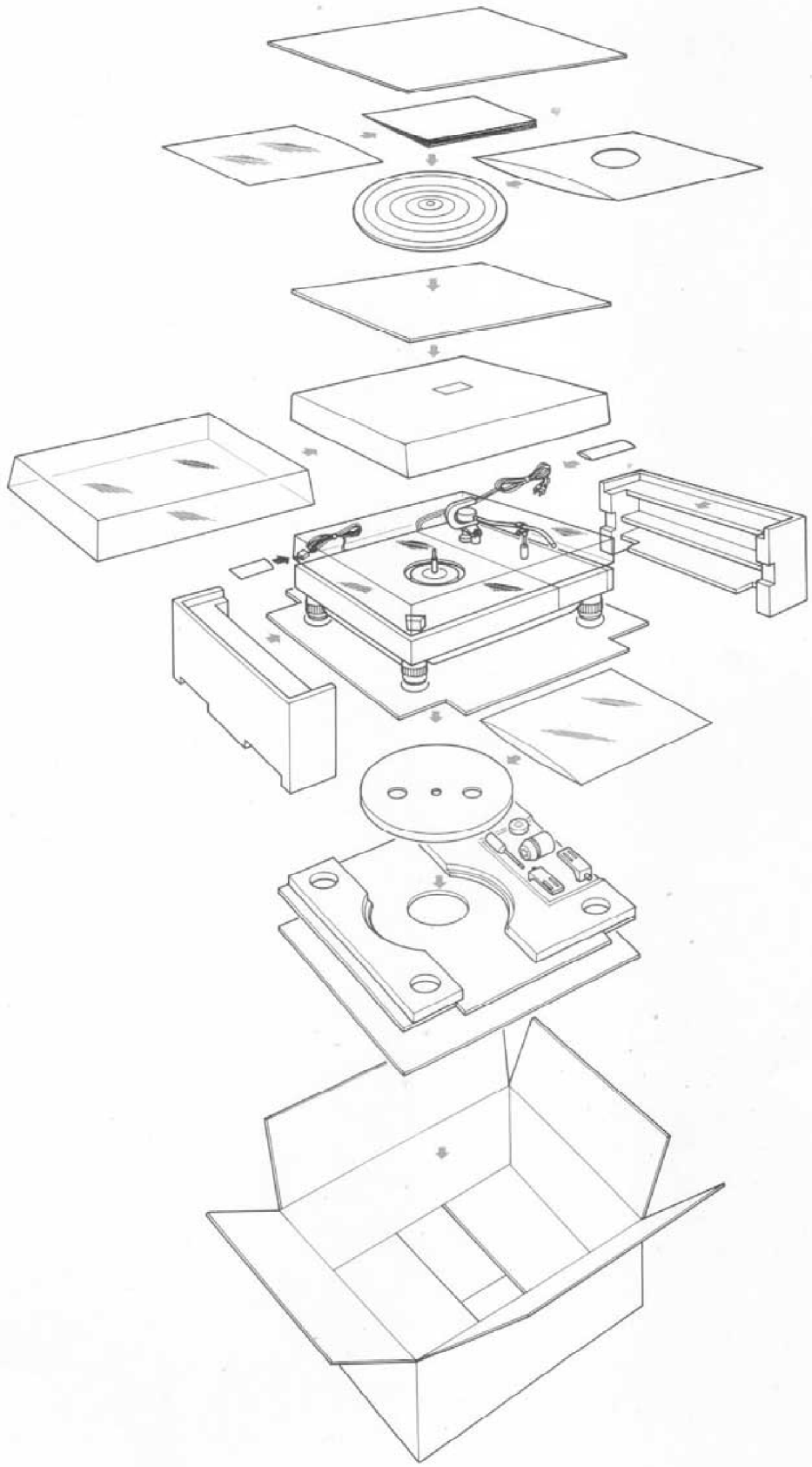

Figure 10. Packing Instructions